CDHS/CTCA JOINT GUIDELINES

Guidelines for the Placement or Return of Tuberculosis Patients into High Risk Housing, Work, Correctional, or In-Patient Settings

The following guidelines have been developed by the California Department of Health Services, Tuberculosis Control Branch in consultation with the Executive Committee of the California Tuberculosis Controllers Association. These guidelines are official State Recommendations and have been endorsed by the California Tuberculosis Controllers Association.

Tuberculosis (TB) transmission has been documented in a variety of high risk settings, including health care facilities, correctional institutions, congregate living sites for HIV-infected persons, residential drug treatment facilities, homeless shelters, "crack houses," and migrant farm worker camps. Transmission can occur when infectious TB patients are housed or work in such settings.

These guidelines have been developed to reduce the risk of TB transmission by:

- Delineating uniform standards for placement and return of TB patients into California high risk settings; and
- Defining criteria for patient non-infectiousness which must be met to place patients in settings in which the risk of transmission and secondary TB cases is high.

Definition of High Risk Settings

I. A housing or work setting in which others will share air with the TB patient and which is characterized by one or both of the following factors:

   A. A large number or high density of persons.

   B. The presence of persons at high risk of progression to active TB disease (see **General Considerations for Placement/Return of TB Patients Living or Working in High Risk Settings**, II, B)

II. Certain unstable or transient group living situations which may be characterized by the factors above, but in which it is not possible to identify or evaluate all potentially exposed persons, should be considered high risk until the evaluation is complete.

Placement/Return Procedures for TB Patients Living or Working in High Risk Settings

I. For cases involving patient transfers within the same local health jurisdiction in which the patient currently resides:
   The TB Controller of that jurisdiction should be consulted prior to transfer.

II. For cases involving patient transfers between local health jurisdictions:
   The TB Controllers from both jurisdictions should be involved in determining the appropriateness of placement/return. For additional information, see CDHS/CTCA "Interjurisdictional Continuity of Care Policy Statement," (4/97).

III. For transfers and discharges from hospitals and other health care facilities:

The patient may not be released without the approval of a written discharge plan by the Health Officer of the local health jurisdiction in which the facility is located.

IV. For releases from correctional institutions:
A written discharge plan must be submitted to the local health officer prior to release.

For additional information, see Health and Safety Code, Sections 121361 and 121362; and CDHS/CTCA "Guidelines for Oversight of Tuberculosis Care Provided Outside the Local Health Department Tuberculosis Program," (4/97). Contact your local TB Controller for consultation.

Note: Health care providers must report patients with known or suspected active TB to the local health department within one (1) working day of identification (California Code of Regulations, Title 17, Section 2500).

General Considerations for Placement/Return of TB Patients Living or Working in High Risk Settings

I. The patient's infectiousness

Infectiousness correlates with the following factors:

A. Disease in the lungs, airways or larynx

B. Presence of cough

C. Presence of acid-fast bacilli (AFB) in the sputum

D. Extent of infiltration on chest radiograph

E. Cavitation on chest radiograph

F. Failure of the patient to cover the mouth and nose when coughing

G. Inappropriate or short duration chemotherapy

H. Non-adherence to chemotherapy

I. Poor clinical or bacteriologic response to therapy

II. The probability that exposed persons, if infected, will develop active disease

A. Co-infection with Human Immunodeficiency Virus (HIV) is the strongest risk factor for progression to active disease among persons infected with *M. tuberculosis*. Injection drug users, who have not been tested for HIV infection, should be considered infected with HIV.

B. Factors which increase the risk of progression to disease include:

1. Co-infection with HIV

2. Substance abuse (especially injection drug use)
3. Diabetes mellitus (especially insulin dependent)

4. Prolonged corticosteroid therapy

5. Other immunosuppressive therapy

6. Cancer of the head and neck

7. Hematological and reticuloendothelial diseases

8. Intestinal bypass or gastrectomy

9. Low body weight (≥ 10% below ideal body weight)

10. Chronic malabsorption

11. Malnutrition and clinical situations associated with rapid weight loss

12. End-stage renal disease

13. Silicosis

14. Less than 4 years of age

III. The potential for transmission of *M. tuberculosis* in the environment

A. Environmental factors which increase the risk of transmission include:

1. Potential that others will share air with the case (either in the same room or via the building ventilation system)

2. Poor supply of fresh air (either through open windows or building ventilation)

3. Larger number and higher density of persons in setting

B. Transmission of *M. tuberculosis* has been documented in a variety of settings. At a minimum, the following types of settings, should be considered high risk:

1. Health care

2. Correctional

3. Drug treatment

4. Other congregate living sites, especially those housing persons with risk factors listed in II (B) above, including shelters for homeless persons, board and care facilities, and residential treatment facilities.

5. Public living accommodations, including single room occupancy hotels, if air is shared in

common areas or through the building ventilation system.

C. All settings should be considered high risk unless and until an assessment of the environment and the occupant population has been completed.

IV. Drug resistance of the patient's TB organisms

While drug susceptibility patterns of the patient may not be known at the time of placement, risk factors for resistance include:

A. Prior tuberculosis treatment;

B. Birth outside the United States; or

C. Contact (e.g. in a household or institutional outbreak) with an infectious case known to be drug resistant.

Prerequisites for Placement/Return of TB Patients Living or Working in High Risk Settings

I. Patients known or suspected to have TB in an infectious stage should not be placed in or returned to high risk settings, such as those described in **General Considerations for Placement/Return of TB Patients Living or Working in High Risk Settings**, III (A and B) above. This restriction also applies when these patients are transferred within a hospital or correctional facility to an area of that institution which meets the definition of a high risk setting.

II. Patients known or suspected to have TB must be non-infectious according to the following criteria in order to be placed in or returned to high risk settings:

A. Patients with previously positive sputum smears must meet all the following criteria:

1. Have three (3) consecutive negative AFB sputum smear* results from sputum collected on different days; **AND**

2. Have completed at least two (2) weeks of multi-drug anti-tuberculosis therapy that is consistent with CDHS/CTCA "Guidelines for the Treatment of Tuberculosis and Tuberculosis Infection for California," (4/97); **AND**

3. Exhibit clinical improvement (e.g. reduction in fever and cough); **AND**

4. Have continued close medical supervision, including directly observed therapy (DOT), if needed; **AND**

5. Continues multi-drug therapy, even if another pulmonary process is diagnosed, pending negative culture results from at least three (3) sputum specimens.

* Obtained from concentrated sputum specimens, per Public Health Mycobacteriology: A Guide for Level III Laboratories. Centers for Disease Control and Prevention, 1985.

B. Patients with only negative sputum smears must meet all the following criteria:

1. Have three (3) consecutive negative AFB sputum smear* results from sputum collected on different days; **AND**

2. Have completed a minimum of four (4) days of multi-drug anti-tuberculosis therapy that is consistent with CDHS/CTCA "Guidelines for the Treatment of Tuberculosis and Tuberculosis Infection for California," (4/97); **AND**

3. Have continued close medical supervision, including directly observed therapy (DOT), if needed; **AND**

4. Continues multi-drug therapy, even if another pulmonary process is diagnosed, pending negative culture results from at least three (3) sputum specimens.

Special Circumstances

For patients described in **Prerequisites for Placement/Return of TB Patients Living or Working in High Risk Settings**, II (A or B) above, more stringent criteria, including longer treatment prior to transfer, should be considered in certain special circumstances. Examples include patient transfer to units housing HIV-infected inmates in correctional facilities, or the placement in any high risk setting of patients known or suspected to have drug resistant TB. Contact your local TB Controller for consultation.

NOTE: No set of guidelines can cover all individual placement situations which can and will arise. More or less stringent criteria may be required in other living or work settings. Thus, when questions on individual situations not covered by these guidelines do arise, consult with the Local TB Control Program or the California Department of Health Services, TB Control Branch, for consultation and further information.

Suggested Readings:

1. Centers for Disease Control and Prevention. Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 1994. MMWR 1994; 43 (No. RR-13).
2. Centers for Disease Control and Prevention. Prevention and Control of Tuberculosis in Correctional Facilities: Recommendations of the Advisory Committee for the Elimination of Tuberculosis. MMWR 1996; 45 (No. RR-8).
3. American Thoracic Society. Control of Tuberculosis in the United States. Am Rev Respir Dis 1992; 146: 1623 - 1633.
4. American Thoracic Society. Treatment of Tuberculosis and Tuberculosis Infection in Adults and Children. Am J Respir Critical Med 149: 1359-1374, 1994.
5. CDHS/CTCA. Interjurisdictional Continuity of Care Policy Statement. 4/97.
6. CDHS/CTCA. Guidelines for the Treatment of Tuberculosis and Tuberculosis Infection for California. 4/97.

* Obtained from concentrated sputum specimens, per Public Health Mycobacteriology: A Guide for Level III Laboratories. Centers for Disease Control and Prevention, 1985.